

ABSTRACT

A discharge voltage detecting unit of an electric discharge machine detects a discharge voltage and determines an average discharge voltage in a specified period of time. An optimum machining condition computing unit determines a discharge current that makes an average discharge voltage detected by a discharge voltage detecting unit equal to an average discharge voltage when a new machining liquid is used. The optimum machining condition computing unit determines an optimal discharging time, an optimal non-operating time, and an optimal servo reference voltage from relational equations depending on the determined discharge current. A machining condition data base storing unit stores the discharge current, the discharging time, the non-operating time, and the servo reference voltage. A servo control unit establishes the optimum machining conditions at the time of machining.